CLAIMS

What is claimed is:

1. A method for operating a mobile satellite communication system having at least one gateway (GW), at least one user terminal (UT), and a constellation of satellites, comprising steps of:

for a site to be protected from UT transmissions, specifying an exclusion zone having a confidence limit (CL) associated therewith; and

selectively providing service to a UT depending on a determined location of the UT relative to the exclusion zone and on an estimated error (E) of the determined UT location.

2. A method as in claim 1, wherein the exclusion zone is specified to comprise at least one of a polygon that defines an area, a volume, or a surface.

3. A method as in claim 1, wherein location of the UT is determined by the UT, and transmitted to the GW.

4. A method as in claim 1, wherein location of the UT is determined by the UT in cooperation with the GW.

5. A method as in claim 1, wherein location of the UT is determined by the GW.

6. A method as in claim 1, wherein the exclusion zone is specified to comprise at least one of a polygon that defines an area, a volume, or a surface, and further considers at least one of RF obstructions and terrain features.

7. A method as in claim 1, wherein the UT is granted service if the value of E is less than CL.

8. A method as in claim 1, wherein the exclusion zone is specified to comprise a polygon defined by connected points on the surface of the earth.

9. A method as in claim 1, wherein the exclusion zone is specified to comprise a volume defined by connected points on the surface of the earth and at least one point located above the surface of the earth.

10. A method as in claim 1, wherein the exclusion zone is specified to comprise a surface defined by at least two connected points on the surface of the earth and at least point located above the surface of the earth.

11. A method as in claim 1, wherein boundaries of the exclusion zone are static.

12. A method as in claim 1, wherein boundaries of the exclusion zone are dynamic and capable of at least one of movement or change in shape.

13. A method as in claim 1, wherein the value of E is a function of the accuracy of the UT local oscillator, and where information that specifies the accuracy of the UT local oscillator is stored in the UT.

14. A method as in claim 1, wherein the value of E is a function of the accuracy of the UT local oscillator, and where information that specifies the accuracy of the UT local oscillator is stored in the GW.

15. A method as in claim 1, wherein the value of E is a function of the accuracy of the UT local oscillator, and where information that specifies the accuracy of the UT local oscillator is stored in a home GW of the UT, and is transferred from the home GW to a serving GW when the UT is roaming.

16. A method as in claim 1, wherein the value of E is a function of the accuracy of the UT local oscillator, and where information that specifies the accuracy of the UT local oscillator is stored in or is determined by the UT and is transferred to the GW.

17. A method as in claim 1, wherein the UT is granted service if the value of E is less than CL, and where the GW sets the value of CL to be less than a possible minimum value of E for excluding all UTs from operating within the exclusion zone.

18. A method as in claim 1, wherein the UT is granted service if the value of E is less than CL, and where the GW sets the value of CL to be greater than a possible maximum value of E for enabling all UTs to operate within the exclusion zone.

19. A method as in claim 1, wherein there are overlapping exclusion zones specified, each having a different value of CL.

20. A method as in claim 1, wherein the exclusion zone is temporary and is established and removed as a function of time.

21. A method as in claim 1, wherein the values of at least one of CL and E vary as a function of time.

22. A method as in claim 1, wherein at least one of the location or shape of the exclusion zone varies as a function of a change in location of the UT.

23. A method as in claim 1, wherein at least one of the location or shape of the exclusion zone varies as a function of a change in location of the GW.

24. A method as in claim 1, wherein at least one of the location or shape of the exclusion zone varies as a function of a change in location of the protected site.

25. A method as in claim 1, wherein the exclusion zone is shared between at least two gateways.

26. A mobile satellite communication system comprising at least one gateway (GW), at least one user terminal (UT), and a constellation of satellites, said GW comprising a controller for controlling operations of said UT and further comprising an interface to at least one of the Public Switched Telephone Network (PSTN) or to the Internet, said GW storing a database containing at least one of a Confidence Polygon, a Confidence Volume, or a Confidence Surface to establish a geometric shape located on the earth, above the earth or in space, or combinations thereof, said GW further storing a static or a variable Confidence Limit (CL) value that is compared to a value of an error (E) in a position location of the UT, said controller acting upon the database and assigned or derived values of CL and E, to determine if a comparison of CL and E, combined with a current position of the UT, yields a certain result according to the operational mode of the GW controller, wherein depending on the operational mode of the GW the result of the comparison affects control of the UT or an external device attached to the UT, whereby the UT is forbidden or allowed to access the mobile satellite system or to make or receive a call, or depending on the operational mode of the GW the result of the comparison affects some operational characteristic of the UT to provide an ability to protect a site from UT emissions.